

THE CLAIMS

As amended, the claims of the application are:

1. (Presently Amended) An electric heater assembly for a smooth top cooking appliance, the assembly comprising a first heating zone (16) provided with at least one first heating element (20), and at least one second heating zone (18) provided with at least one second heating element (22), the at least one second heating zone at least partially surrounding the first heating zone, and first and second a cyclic energy controllers ~~regulator~~ (26, 32) for energising the heating elements from a power supply (28), wherein the a first cyclic energy controller (26) is ~~provided~~ adapted to energise the at least one first heating element (20) and the a second cyclic energy controller (32) is ~~provided~~ adapted to energise the at least one second heating element (22), and wherein the assembly is adapted whereby the first heating zone (16) is operable alone with the first cyclic energy controller (26) controlling power of the at least one first heating element ~~(16)~~ (20) at selected settings between a maximum duty cycle and a minimum duty cycle, and wherein the assembly is further adapted whereby the first and the at least one second heating zones (16, 18) are operable together and such that in a selected full power operating condition of the assembly the second cyclic energy controller (32) energises the at least one second heating element (22) at substantially maximum duty cycle to provide a substantially maximum power in the at least one

second heating zone, and the first cyclic energy controller (26) energises the at least one first heating element (20) at less than maximum duty cycle to provide less than maximum power in the first heating zone.

2. (Presently Amended) An assembly as claimed in claim 1, wherein the heater assembly is further adapted whereby the first and second heating zones (16, 18) are operable together such that, at selected operating power conditions of the heater assembly, lower than the full power operating condition, a predetermined ~~fixed or~~ ~~varying~~ ratio is arranged between the duty cycle provided by the first cyclic energy controller and the duty cycle provided by the second cyclic energy controller.

3. (Previously Presented) An assembly as claimed in claim 2, wherein the ratio is fixed.

4. (Previously Presented) An assembly as claimed in claim 3, wherein the predetermined ratio is that obtaining at the full power operating condition of the heater assembly.

5. (Previously Presented) An assembly as claimed in claim 3, wherein the predetermined ratio is maintained down to a low power operating condition of the heater assembly limited by a minimum duty cycle achievable by the first cyclic energy controller (26).

6. (Previously Presented) An assembly as claimed in claim 5, wherein, when such low power operating condition of the heater assembly is reached, a lower power operating condition of the heater assembly is obtained by maintaining, at its minimum value, the duty cycle set by the first cyclic energy controller (26) and further reducing the duty cycle provided by the second cyclic energy controller (32) whereby a further predetermined ratio is established between the duty cycles provided by the first and second cyclic energy controllers.

7. (Presently Amended) An assembly as claimed in claim 2 3, wherein the ratio is variable.

8. (Previously Presented) An assembly as claimed in claim 7, wherein the ratio is arranged to vary in predetermined manner whereby it is gradually changed from an initial value, obtaining at the full power operating condition of the heater assembly, to a final value, obtaining at a lowest power operating condition of the heater assembly.

9. (Previously Presented) An assembly as claimed in claim 8, wherein the final value of the ratio is substantially unity, achieved by operating both the first and second cyclic energy controllers (26, 32) to provide substantially minimum and matched duty cycles.

10. (Presently Amended) An assembly as claimed in claim 1 wherein, in the selected full power operating condition of the heater assembly, the substantially maximum duty cycle applied to second cyclic energy controller (32) ~~is arranged to energise~~ the at least one second heating element (22) has a value of at substantially 100 percent ~~duty cycle~~, with the first cyclic energy controller (26) arranged to energise the at least one first heating element (20) at about 80 percent duty cycle.

11. (Previously Presented) An assembly as claimed in claim 1, wherein the first and second cyclic energy controllers (26, 32) are selected from energy controllers comprising first and second cycling energy regulators and energy controllers comprising first and second cycling relays.

12. (Previously Presented) An assembly as claimed in claim 1, wherein the first and second cyclic energy controllers (26, 32) are operated by a microprocessor-based control system (34).

13. (Previously Presented) An assembly as claimed in claim 12, wherein the microprocessor-based control system (34) is associated with manual input selection means (36).

14. (Previously Presented) An assembly as claimed in claim 1, wherein the first heating zone (16) comprises a main heating zone, with the at least one second heating zone (18) comprising at least one auxiliary heating zone.

15. (Previously Presented) An assembly as claimed in claim 14, wherein the first heating zone (16) is circular and arranged concentrically with and surrounded by at least one second heating zones (18).

16. (Previously Presented) An assembly as claimed in claim 14, wherein the first heating zone (16) is circular and partially bordered by at least one second heating zones (18).

17. (Previously Presented) An assembly as claimed in claim 1, wherein the first and second heating zones (16, 18) are separated by a wall (14) of thermal insulation material.